Application No. 10/786,356   2   Docket No.: A0312.70517US00
Amendment dated December 14, 2006
Reply to Office Action of September 14, 2006

AMENDMENTS TO THE CLAIMS

1.   (Currently amended) A DMA controller comprising :

a DMA datapath for transferring data from a DMA source to a DMA destination; and

channel control logic for controlling transfer of data through the DMA datapath in response to parameters contained in at least one DMA descriptor having a programmable format, wherein each DMA descriptor defines a single DMA transfer.

2.   (Original) A DMA controller as defined in claim 1, wherein the DMA descriptor has a programmable size.

3.   (Original) A DMA controller as defined in claim 1, wherein the DMA descriptor has a programmable operating mode.

4.   (Original) A DMA controller as defined in claim 1, wherein the DMA descriptor includes a next descriptor pointer that points to a next descriptor in a descriptor list.

5.   (Original) A DMA controller as defined in claim 1, wherein the DMA descriptor includes a next descriptor size that defines a size of a next descriptor in a descriptor list.

6.   (Original) A DMA controller as defined in claim 1, wherein a size of a first DMA descriptor is defined by a register value.

7.   (Original) A DMA controller as defined in claim 1, wherein a size of the DMA descriptor is defined by a previous descriptor.

8.   (Original) A DMA controller as defined in claim 1, wherein the DMA descriptor includes a flow mode that defines a next operation.

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9.   (Original) A DMA controller as defined in claim 8, wherein the flow mode is selected from a stop mode, an autobuffer mode, a descriptor array mode, a small descriptor list mode and a large descriptor list mode.

10.   (Original) A DMA controller as defined in claim 5, wherein the channel control logic is configured to fetch elements of a next descriptor in response to the next descriptor size.

11.   (Original) A DMA controller as defined in claim 10, wherein the channel control logic is configured to decrement a descriptor element count from the next descriptor size during fetching of descriptor elements.

12.   (Original) A DMA controller as defined in claim 1, wherein the channel control logic is configured to fetch programmable descriptors in a list of descriptors.

13.   (Original) A DMA controller as defined in claim 12, wherein the descriptors in the list of descriptors have different formats.

14.   (Original) A DMA controller as defined in claim 12, wherein the descriptors in the list of descriptors have different sizes.

15.   (Currently amended) A method for DMA transfer, comprising:

providing a DMA datapath for transferring data from a DMA source to a DMA destination; and

controlling transfer of data through the DMA datapath in response to parameters contained in at least one DMA descriptor having a programmable format, wherein each DMA descriptor defines a single DMA transfer.

16.   (Original) A method as defined in claim 15, further comprising fetching a next descriptor based on information contained in a current descriptor.

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